AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Cancelled).
2. (Cancelled).
3. (Cancelled).
4. (Cancelled).
5. (Cancelled).
6. (Cancelled).
7. (Cancelled).
8. (Cancelled).
9. (Cancelled).
10. (Cancelled).
11. (Cancelled).
12. (Cancelled).
13. (Cancelled).
14. (Cancelled).
15. (Cancelled).
16. (Cancelled).

17. (Cancelled).

18. (Cancelled).

19. (Cancelled).

20. (Cancelled).

21. (Cancelled).

22. (Cancelled).

23. (Currently amended) A method of administering the polypeptide of any one of claims 14-16 and 20, comprising the step of delivering said polypeptide to an in vitro cell culture or in vivo to a mammal.

24. (Original) The method of claim 23, wherein said administration comprises systemic administration.

25. (Original) The method of claim 23, wherein said mammal is afflicted with a condition selected from the group consisting of cerebral ischaemic neuronal damage, traumatic brain injury, peripheral neuropathy, Alzheimer's disease, Huntington's disease, Parkinson's disease, amyotrophic lateral sclerosis, and memory impairment.

26. (Original) The method of claim 23, wherein said mammal is afflicted with a neuronal disorder of the peripheral nervous system, the medulla, or the spinal cord.

27. (Original) The method of treating a neurodegenerative disease or disorder in an animal, comprising administering to said animal one or more of the neublastin nucleic acids set forth in SEQ. ID. NOS. 1, 3, 8, 13, 14, 15, 29 and 30.

28. (Original) A method of treating a neurodegenerative disease or disorder in an animal, comprising administering to said animal a neublastin polypeptide one or more of the neublastin polypeptides set forth in SEQ. ID. NOS. 2, 4, 5, 6, 7, 9, 10, 11, 12 and 16.

29. (Original) An antibody that binds to any one of the polypeptides set forth in SEQ. ID. NOS. 2, 4, 5, 6, 7, 9, 10, 11, 12 and 16.

30. (Original) The antibody of claim 29, wherein said antibody is a monoclonal antibody.

31. (Original) A method of determining whether a neurodegenerative disease or disorder in an animal is associated with an altered activity in a neublastin neurotrophic factor polypeptide, said method comprising the steps of:

contacting a biological sample from said animal with the antibody of claims 29 or 30 and

determining whether an immune complex forms between said antibody and said protein as an indication of whether said neural condition results from an altered level of activity in said neublastin neurotrophic factor polypeptide.

32. (Original) The method of claim 31, further comprising the step of comparing a level of said immune complex that forms in said sample with a level of said immune complex that forms in a corresponding biological sample from a patient lacking said neural condition, and determining from said comparison whether said disease or disorder results from said abnormality in a neublastin neurotrophic factor polypeptide.

33. (Cancelled).

34. (Cancelled).

35. (Cancelled).

36. (Cancelled).

37. (Cancelled).

38. (Cancelled).

39. Cancelled).

40. (Cancelled).

41. (Cancelled).

42. (Cancelled).

43. (Cancelled).

44. (Cancelled).

45. (Cancelled).

46. (Cancelled).

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48. (Cancelled).

49. (Cancelled).

50. (Cancelled).

51. (Cancelled).

52. (Cancelled).

53. (Cancelled).

54. (Original) An antibody to a neublastin peptide or neublastin polypeptide, wherein said antibody is generated using any one of peptides:

GPGSRARAAGARGC (AA30-43 of SEQ ID NO:9);
LGHRSDELVRFRFC (AA 57-70 of SEQ ID NO:9);
CRRARSPHDLSL (AA 74-85 of SEQ ID NO:9);
LRPPPGSRPVSQPC (AA 94-107 of SEQ ID NO: 9);
STWRTVDRLSATAC (AA 123-136 of SEQ ID NO:9);
CRLRSQLVPVRALGLGHRSDELVRFRFC (AA43-70 of SEQ.ID.NO: 9);
CRRARSPHDLSLASLLGAGALRPPPGSRPVSQPC (AA74-107 of SEQ.ID.NO: 9);
CRPTRYEAVSFMDVNSTWRTVDRLSATAC (AA108-136 of SEQ.ID.NO:9);
CRPTRYEAVSFMDVNST (AA108-124 of SEQ ID NO: 9); and
ALRPPPGSRPVSQPC (AA93-107 of SEQ ID NO:9).

55. (Cancelled).

56. (Original) A kit comprising, in one or more containers, a substance selected from the group consisting of a neublastin polypeptide, an antibody against a neublastin polypeptide, nucleic acid probes capable of hybridizing to RNA of neublastin, or pairs of nucleic acid primers capable of priming amplification of at least a portion of a neublastin gene.

57. (Original) A method of diagnosing or screening for the presence of or a predisposition for developing a disease or disorder characterized by an aberrant level of a neublastin polypeptide in a subject comprising measuring the level of said neublastin polypeptide, RNA encoding the neublastin polypeptide, or functional activity of the neublastin polypeptide in a sample derived from the subject, in which an increase or decrease in the level of the neublastin polypeptide, neublastin RNA, or functional activity of neublastin polypeptide in the sample, relative to the level of the

neublastin polypeptide, nueblastin RNA or functional activity of neublastin found in an analogous sample not having the disease or disorder or a predisposition for developing the disease or disorder, indicates the presence of the disease or disorder or a predisposition for developing the disease or disorder.

58. (Original) A method for screening a purified neublastin polypeptide, or derivative or fragment thereof, or a modulator of the activity of the foregoing, for activity in treating or preventing a disease, comprising measuring and comparing alterations in the phenotype, genotype, behavior, survival or proliferation of cells from a cell line or test animal which are derived from or display characteristics associated with the disease, which cells or animals have been contacted with or administered the neublastin polypeptide, derivative, fragment, or modulator, with the phenotype, genotype, behavior, survival or proliferation in cells or animals not so contacted with or administered the neublastin polypeptide, derivative, fragment, or modulator.

59. (Original) A method of treating a neurological disorder selected from the group consisting of peripheral neuropathies in a mammal which comprises administering a therapeutically effective amount of a neublastin polypeptide, wherein said peripheral neuropathy is selected from the group consisting of trauma-induced neuropathies, chemotherapy-induced neuropathies, toxin-induced neuropathies, drug-induced neuropathies, vitamin-deficiency-induced neuropathies; idiopathic neuropathies; and diabetic neuropathies.

60. (Original) The method of claim 23 wherein the neublastin is delivered directly into the central nervous system.

61. (Original) The method of claim 23 wherein the neublastin is delivered systemically by subcutaneous injection, intravenous administration, or intravenous infusion.

62. (Currently amended) A method of using the sequence of one or more nucleic acids of any one of claims 1-4 or 45-49 in a computer program for identifying, isolating or detecting novel nucleic acid sequences.

63. (Currently amended) A method of using the sequence of one ore more nucleic acids of any one of claims 1-4, 33 or 45-49 on a fixed substrate or DNA chip for identifying, isolating or detecting novel nucleic acid sequences.

64. (Currently amended) A method of using the sequence of one or more polypeptides of any one of claims 14-16, 20, 22 or 36-44 in a computer program for identifying, isolating or detecting novel nucleic acid sequences.

65. (Original) A method for identifying a candidate compound that induces a neuroblastin-medicated biological effect, the method comprising the steps of:

(a) providing a test cell, said cell when contacted with neublastin being induced to express a detectable product;

(b) exposing the cell to the candidate compound and detecting the detectable product, said expression of the detectable product indicating the ability of the candidate compound to induce said neuroblastin-mediated biological effect.